

ABSTRACT

A material handling system for lifting a load and a method sensing an unstable state of the material handling system. The system includes a motor, a brake and a drive. The method includes storing a model of the motor in the drive and generating a signal in the drive. The signal has a voltage and a frequency. The method further includes providing the signal to the motor, sensing a current value of the signal, determining a modeled value based in part on the sensed current value, comparing an actual value to the modeled value to determine whether the load is stable, and generating an output that sets the brake when the load is potentially unstable.

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